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Variation of Earth Temperature with Height

by L.P. Smith

In an attempt to place a date on the start of grass growth the 1 ft earth temperatures in February, March and April were examined.

Taking the date of attaining 6.6°C as the "date of spring", found by straight line interpolation from monthly means, it was possible to estimate the effect of height in the various regions.

The results were

North East	0.8 days per 10m
Wales	1.2 days per 10m
North West	1.0 days per 10m

No high level stations were available in the South West but existing records suggested a figure about 1.5 days per 10m.

The drop in temperature with increase in height was something of the following order

Degrees Celsius per 100m

	February	March	April
North East	0.40°	0.75°	1.0°
Wales	0.50°	0.75°	0.85°
North West	0.20°	0.65°	0.85°

This suggests that any height correction for earth (1 ft) temperatures must be function of time of year.

Any comments or suggestions on this paper should be sent to the author.

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